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DEPARTMENT OF HOMELAND SECURITY

[Docket No. ICEB-2022-0016]

RIN 1653-ZA36

Update to the Department of Homeland Security STEM Designated Degree Program List

AGENCY: U.S. Immigration and Customs Enforcement (ICE), Department of Homeland Security (DHS).

SUMMARY: This notice announces that the Secretary of Homeland Security (Secretary) is amending the DHS STEM Designated Degree Program List by adding eight qualifying fields of study and a corresponding Department of Education Classification of Instructional Programs (CIP) code for each. No CIP codes from the existing list are being removed. The list is used to determine whether a degree obtained by certain F-1 nonimmigrant students following the completion of a program of study qualifies as a science, technology, engineering, or mathematics (STEM) degree as determined by DHS, as required for the F-1 student to be eligible to apply for a 24-month extension of their post-completion optional practical training (OPT).

DATES: DHS adopts the list announced in this notice as of [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER].

FOR FURTHER INFORMATION CONTACT: Sharon Snyder, Unit Chief, Policy and Response Center Unit, Student and Exchange Visitor Program; U.S. Immigration and Customs Enforcement, 500 12th Street, SW, Stop 5600, Washington, D.C., 20536-5600; email: sevp@ice.dhs.gov, telephone: (703) 603-3400. This is not a toll-free number. Program information is available at https://www.ice.gov/sevis/.

SUPPLEMENTARY INFORMATION:

What action is DHS taking under this notice?

The Department of Homeland Security (DHS) is updating the list of STEM fields of study that fall within the regulatory definition of "STEM field." The list, known as the DHS STEM Designated Degree Program List ("STEM list"),[1] is used to determine whether a degree obtained by an F-1 nonimmigrant student qualifies as a STEM degree, as required for the F-1 nonimmigrant student to be eligible to apply for a STEM OPT extension. The current format of the STEM list, which consists of four primary CIP code series designated at the two-digit level, and CIP codes in related fields designated at the six-digit level, was established in a final rule issued in 2016.[2] The STEM list was most recently updated in 2022.[3]

Why is DHS taking this action?

In 2016, DHS published a final rule providing a 24-month extension of OPT for F-1 nonimmigrant students who majored in a designated STEM field of study. *See* 81 FR 13039 (March 11, 2016) ("Improving and Expanding Training Opportunities for F-1 Nonimmigrant Students With STEM Degrees and Cap-Gap Relief for All Eligible F-1 Students") ("2016 STEM Rule"). The 2016 STEM Rule stated that DHS will continue to accept for consideration suggested additions or deletions to the STEM list and may publish updates to the STEM list in the *Federal Register*. In 2022, DHS published a *Federal Register* notice announcing the addition of 22 qualifying fields of study to the STEM list. *See* 87 FR 3317 (January 21, 2022) ("Update to the Department of Homeland Security STEM Designated Degree List")*.* The *Federal Register* notice also included instructions for how interested parties, including members of the public, can nominate CIP codes for potential inclusion on or removal from the STEM list. DHS received from interested parties, including members of the public, a total of 285 nominations,

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[1] ICE, DHS STEM Designated Degree Program List, https://www.ice.gov/doclib/sevis/pdf/stemList2022.pdf (last visited Oct. 25, 2022).
[2] *See* 81 FR 13039, Mar. 11, 2016.
[3] *See* 87 FR 3317, Jan. 21, 2022.

representing 120 unique fields of study, to be added to the STEM list. DHS did not receive any nominations to remove CIP codes currently on the list. DHS is now announcing that a number of the fields of study submitted for consideration will be added to the STEM list.[4] Nominators may resubmit a nomination with additional supporting views and evidence, at any time, if their original submission is not addressed in this notice.

What is OPT and STEM OPT?

OPT is one type of work permission available to certain F-1 nonimmigrant students. It allows eligible F-1 students (except those in English language training programs) to obtain real-world work experience directly related to their major area of study.

The STEM OPT extension is a 24-month extension of OPT available to F-1 nonimmigrant students who have completed 12 months of OPT and received a degree in an approved STEM field of study as designated by the STEM list.

Who may be impacted by this notice?

This notice may impact qualifying F-1 nonimmigrant students who seek a 24-month extension of post-completion OPT.

Where can I find the STEM list?

The STEM list can be found in the docket for this notice and on the Student and Exchange Visitor Program (SEVP) website.[5]

What authority does DHS have to make changes to the STEM list?

The Secretary has broad authority to administer and enforce the Nation's immigration laws. *See generally* 6 U.S.C. 202; Immigration and Nationality Act of 1952,

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[4] While the 2016 STEM Rule provided for "additions or deletions to the list," no deletions will be made at this time.
[5] *See* SEVP, Eligible CIP Codes for the STEM OPT Extension, https://studyinthestates.dhs.gov/stem-opt-hub/additional-resources/eligible-cip-codes-for-the-stem-opt-extension (last visited Oct. 25, 2022).

as amended (INA), sec. 103, 8 U.S.C. 1103. The INA establishes the F-1 nonimmigrant classification for individuals who wish to enter the United States temporarily and solely for the purpose of pursuing a full course of study at an academic institution or accredited language training school certified by the U.S. Immigration and Customs Enforcement's (ICE) SEVP. *See* INA sec. 101(a)(15)(F)(i), 8 U.S.C. 1101(a)(15)(F)(i). The INA provides the Secretary with broad authority to determine the time and conditions under which nonimmigrants, including F-1 students, may be admitted to the United States. *See* INA sec. 214(a)(1), 8 U.S.C. 1184(a)(1). The Secretary also has broad authority to determine which individuals are authorized for employment in the United States. *See* INA sec. 274A(h)(3), 8 U.S.C. 1324a(h)(3). Finally, the Secretary, or his or her designee, has authority to maintain the STEM list, which is a complete list of qualifying degree program categories published on the SEVP website at https://www.ice.gov/sevis. Changes that are made to the STEM list may also be published in a notice in the *Federal Register*. *See* 8 CFR 214.2(f)(10)(ii)(C)(*2*)(*ii*).

Who may nominate a CIP code?

Interested parties, including members of the public, may nominate a CIP code for inclusion on, or removal from, the STEM list.

How does DHS assess nominations?

Nominations to add or remove degrees from the STEM list are assessed consistent with the authorizing regulation.[6] As defined in the governing regulations, a STEM field is a field included in the CIP taxonomy[7] that falls within the two-digit series containing engineering, biological sciences, mathematics and statistics, and physical sciences, or a related field, which generally involves research, innovation, or development of new

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6 *See* 8 CFR 214.2(f)(10)(ii)(C)(*2*).
7 The CIP taxonomy is a taxonomic scheme that was developed by the Department of Education's National Center for Education Statistics (NCES) to support the accurate tracking and reporting of fields of study and program completion activity. See the NCES website (https://nces.ed.gov/ipeds/cipcode/Default.aspx?y=55) (last visited Oct. 25, 2022).

technologies using engineering, mathematics, computer science, or natural sciences (including physical, biological, and agricultural sciences). *See* 8 CFR 214.2(f)(10)(ii)(C)(*2*)(*i*). This definition is widely used by U.S. institutions of higher education and provides an objective measure by which to identify STEM fields of study.

Through regulation,[8] DHS has designated four areas as core STEM fields and lists these four areas at the two-digit CIP code level. As a result, any new additions to those areas are automatically included on the STEM list. These four areas are: Engineering (CIP code 14), Biological and Biomedical Sciences (CIP code 26), Mathematics and Statistics (CIP code 27), and Physical Sciences (CIP code 40). If a degree is not within the four core fields, DHS considers whether the degree is in a STEM-related field listed at the six-digit level. The six-digit designation allows for individualized review of a specific field of study to ensure it meets the "related field" criteria of "involving research, innovation, or development of new technologies using engineering, mathematics, computer science, or natural sciences (including physical, biological, and agricultural sciences)."

SEVP evaluates submissions to assess whether the degree is generally considered to be a STEM degree by recognized authorities, including input from educational institutions, governmental entities, and non-governmental entities. SEVP also reviews the National Center for Education Statistics (NCES) definition of the CIP code, and any supporting material submitted by the nominator, such as the required curriculum for the degree and the extent to which it is comprised of core STEM disciplines, as well as research, innovation, and development of new technologies using engineering, mathematics, computer science, or natural sciences (including physical, biological, and agricultural sciences). Additionally, degree requirements and curriculum may be assessed

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[8] *See* 8 CFR 214.2(f)(10)(ii)(C)(*2*)(*i*).

across academic institutions to ensure that the core aspects of the degree are sufficiently consistent among educational institutions.

A proposed addition does not have to have all supporting elements to be added to the STEM list. DHS assesses the totality of a submission and may approve a proposed CIP code if the submission presents sufficient evidence and reasoning to establish that the degree under consideration fits within the regulatory definition of a STEM field.

How may a nomination be submitted?

Nominations may be submitted by email to the SEVP Response Center at *SEVP@ice.dhs.gov*, with the subject line "Attention: STEM CIP Code Nomination."

What new fields of study will be added to the STEM list?

The following fields of study are being added to the STEM list:

Landscape Architecture (04.0601) *A program that prepares individuals for the independent professional practice of landscape architecture and research in various aspects of the field. Includes instruction in geology and hydrology; soils, groundcovers, and horticultural elements; project and site planning; landscape design, history, and theory; environmental design; applicable law and regulations; and professional responsibilities and standards.* This field of study, as described in the NCES definition, is comprised of STEM disciplines such as research, innovation, or development of new technologies using natural sciences, engineering, and mathematics.

Institutional Research (13.0608) *A program of study that prepares an individual to be an institutional researcher at a postsecondary educational institution. Includes instruction in data analysis, data-driven decision-making, data mining, higher education administration and organization, research methods, and statistics.* This is a new CIP code added by NCES in its decennial 2020 update to the CIP. The field of study, as described in the NCES definition, is comprised of STEM disciplines such as research,

innovation, or development of new technologies using mathematics and computer science.

Mechatronics, Robotics, and Automation Engineering Technology/Technician (15.0407) *A program that prepares individuals to apply basic engineering principles and technical skills in the support of engineers to the design, development, and operational evaluation of autonomous, computer-controlled, electro-mechanical systems. Includes instruction in computer and software engineering, control engineering, electronic and electrical engineering, mechanical engineering, and robotics.* This is a new CIP code added by NCES in its decennial 2020 update to the CIP. The field of study, as described in the NCES definition, is comprised of STEM disciplines such as research, innovation, or development of new technologies using engineering and computer science.

Composite Materials Technology/Technician (15.0617) *A program of study that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in the development, manufacture, and use of composite materials in aircraft technology, automotive technology, boats, medical prostheses, and wind turbines. Includes instruction in computer-aided design and drafting, composite materials and processes, composite maintenance, composite manufacturing, composite repair, material science, and mold manufacturing and production.* This is a new CIP code added by NCES in its decennial 2020 update to the CIP. The field of study, as described in the NCES definition, is comprised of STEM disciplines such as research, innovation, or development of new technologies using engineering, physical sciences, and computer science.

Linguistics and Computer Science (30.4801) *A program that focuses on the relationship between computer and human language and computational techniques applied to natural language. Includes instruction in computer programming, human languages, linguistic analysis, logic, natural language processing, semantics, machine*

learning, psycholinguistics, software engineering, and syntax. This is a new CIP code added by NCES in its decennial 2020 update to the CIP. The field of study, as described in the NCES definition, is comprised of STEM disciplines such as research, innovation, or development of new technologies using computer science.

Developmental and Adolescent Psychology (42.2710) *A program that focuses on the scientific study of the unique stages of psychological growth and development of individuals from adolescence to adulthood. Includes instruction in cognitive and perceptual development, emotional development, personality development, the effects of biological maturation on behavior, theories of cognitive growth and related research methods, testing and assessment methods for different age levels, research on child and adolescent behavior therapy, and the psychology of aging.* This is a new CIP code added by NCES in its decennial 2020 update to the CIP. The field of study, as described in the NCES definition, is comprised of STEM disciplines such as research, innovation, or development of new technologies using biological sciences.

Geospatial Intelligence (43.0407) *A program that prepares individuals to analyze security and intelligence problems using a geographic perspective by relating human actions to cultural, political, economic, social, and physical landscapes. Includes instruction in aerial photography analysis, cartography, geographic information systems (GIS), physical geography, remote sensing, spatial programming, and quantitative methods in geographic research.* This is a new CIP code added by NCES in its decennial 2020 update to the CIP. The field of study, as described in the NCES definition, is comprised of STEM disciplines such as research, innovation, or development of new technologies using mathematics and computer science.

Demography and Population Studies (45.0501) *A program that focuses on the systematic study of population models and population phenomena, and related problems of social structure and behavior. Includes instruction in population growth, spatial*

distribution, mortality and fertility factors, migration, dynamic population modeling, population estimation and projection, mathematical and statistical analysis of population data, population policy studies, and applications to problems in economics and government planning. The field of study, as described in the NCES definition, is comprised of STEM disciplines such as research, innovation, or development of new technologies using mathematics and computer science.

Paperwork Reduction Act (PRA)

Eligible students are required to submit a Form I-765, "Application for Employment Authorization," to request employment authorization and an Employment Authorization Document, and a Form I-983, "Training Plan for STEM OPT Students," to ensure that they are receiving the academic and training benefits of the STEM OPT extension. Consistent with the PRA, the Office of Management and Budget (OMB) has previously approved the collection of information contained on the current Form I-765 (OMB Control No. 1615-0040) and Form I-983 (OMB Control No. 1653-0054). Although there could be a slight increase in the number of filings for both the Form I-765 and Form I-983 because of this notice, the number of filings currently contained in the OMB annual inventory is sufficient to cover any additional filings. Accordingly, there is no further action required under the PRA.

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Alejandro N. Mayorkas,

Secretary,

U.S. Department of Homeland Security.
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